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A NEW SUBSPECIES OF MARINE ISOPOD FROM TEXAS

By Robert J. Menzies

Through the courtesy of Joel W. Hedgpeth, formerly of the Institute of Marine Science, Port Aransas, Tex., I received 12 specimens of an idotheid isopod that superficially resemble *Erichsonella attenuata* (Harger). A comparison of this material with specimens of *E. attenuata* and *E. filiformis* (Say), lent by Dr. Fenner A. Chace, Jr., curator of the division of marine invertebrates, United States National Museum, reveals the fact that the Texas specimens, in spite of their general appearance, are very closely related to *E. filiformis*. In my opinion, the differences warrant the erection of a new subspecies.

The descriptions given by Harger and Richardson of *E. filiformis* are inaccurate in a few important details, and necessary corrections are made in this paper.

Genus ERICHSONELLA Benedict

Richardson (1905, p. 400) characterized the genus in part with the statement, "The epimera of all the segments of the thorax, including the first, are distinctly separated from the segments." There is no indication of epimeral separation from the first peraeonal (thoracic) somite in the specimens of *E. attenuata* and *E. filiformis* that I have examined, although the epimera of peraeonal somites 2 to 7 are clearly separated from their somites. The male penis is composed of a medially cleft plate (appearing as two separate pieces), and this fact should be added to the generic descriptions of Harger (1880, pp. 354–355) and Richardson (1905, p. 400).

The two subspecies of *E. filiformis* may be distinguished by the following diagnoses:

ERICHSONELLA FILIFORMIS FILIFORMIS (Say)

FIGURE 103, *a*

Stenosoma filiformis SAY, 1818, p. 424.
Erichsonella filiformis (Say) RICHARDSON, 1905, pp. 401–403, figs. 449, 450 (and synonymy).

Diagnosis.—Frontal margin below dorsal cephalic elevation with elevated tubercles, one on each side of midline. Supralateral extension of second peraeonal somite extending outward from lateral thoracic margin. Epimeral plates wider than long, those of somites 2 to 4 generally (in some the tips protrude) concealed from dorsal view by the lateral expansion of anterolateral somite margin; those of somites 5 to 7 visible in dorsal view. Midlateral pleotelson extension angulate, extending far beyond pleotelson lateral border. Width (at widest part) of pleotelson exceeding one-half the length.

ERICHSONELLA FILIFORMIS ISABELENSIS, new subspecies

FIGURES 103, *b;* 104

Types.—Holotype male (U.S.N.M. No. 87482), allotype female (U.S.N.M. No. 87483), and one male and one female paratype (U.S.N.M. No. 89550); two male, two female paratypes, Institute of Marine Science, Port Aransas, Tex.; and four female paratypes, Pacific Marine Station, Dillon Beach, Calif.

Type locality.—Ship channel, Gulf of Mexico, at Port Isabel, Tex., Joel W. Hedgpeth collector, March 15, 1947.

Measurements.—Holotype, length 11.7 mm., width at widest part (second peraeon somite) 2.0 mm.; allotype, length 10.5 mm., width 2.3 mm.

Diagnosis.—Frontal margin below dorsal cephalic elevation smooth, lacking two raised tubercles. Supralateral extension of second peraeonal somite not extending beyond lateral margin. Epimeral plates longer than wide, visible in dorsal view on peraeonal somites 2 to 7. Midlateral pleotelson extension reduced to a mere knob. Width of pleotelson (at widest part) less than one-half the length.

The new subspecies is identical with its parent subspecies, *E. f. filiformis*, in a number of significant respects, differing from it, as is evident from the diagnosis, only in that structures present on *E. f. filiformis* are reduced greatly in size and very slightly in configuration in *E. f. isabelensis*. The reduced structures present an isopod that superficially appears vastly different from its parent subspecies. In fact, specimens of *E. f. isabelensis* have a great resemblance to specimens of *E. attenuata*. However, both *E. f. filiformis* and *E. f. isabelensis* differ from *E. attenuata* in having a widely bifurcating frontal lamina

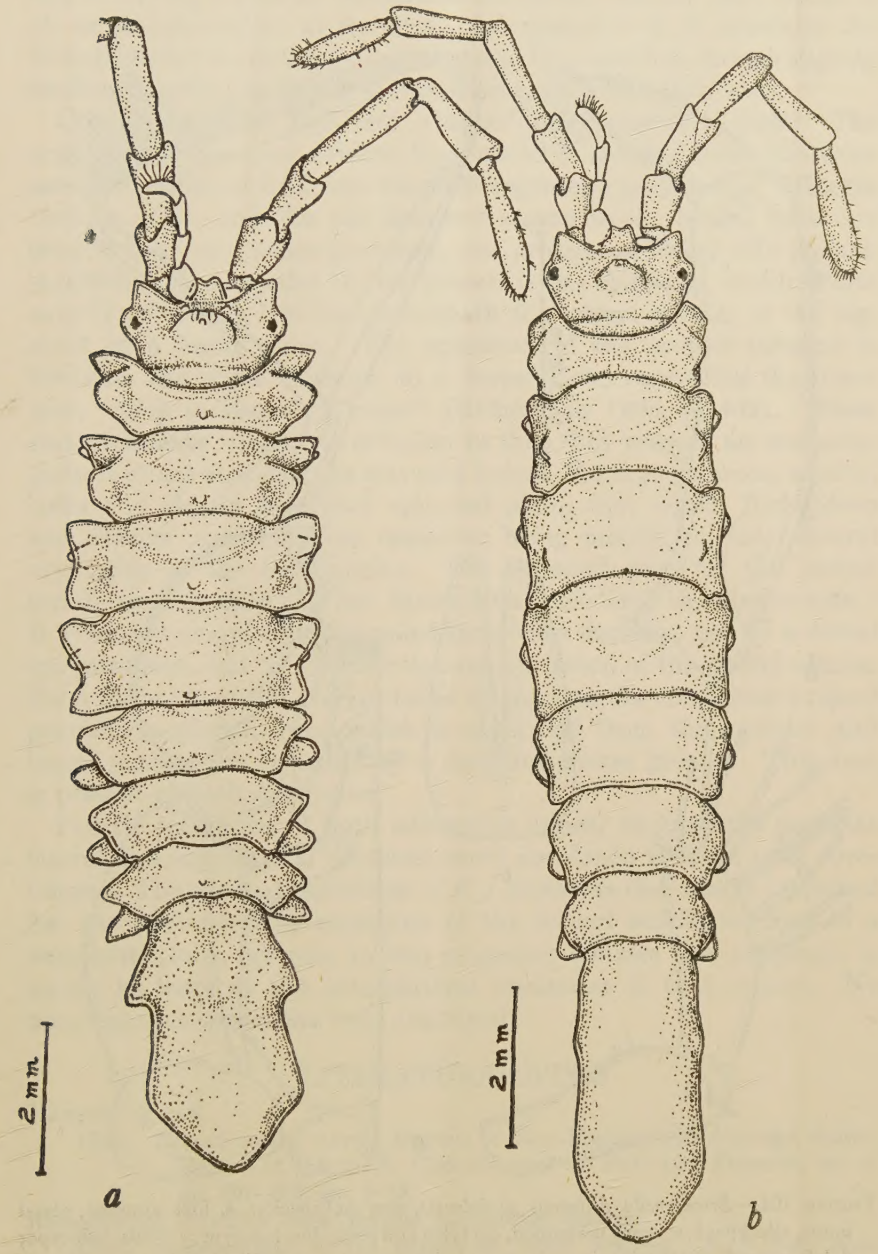

FIGURE 103.—*a*, *Erichsonella filiformis filiformis* (Say) male, dorsal view. *b*, *Erichsonella filiformia isabelensis*, new subspecies, male holotype, dorsal view. Magnification as indicated by scale.

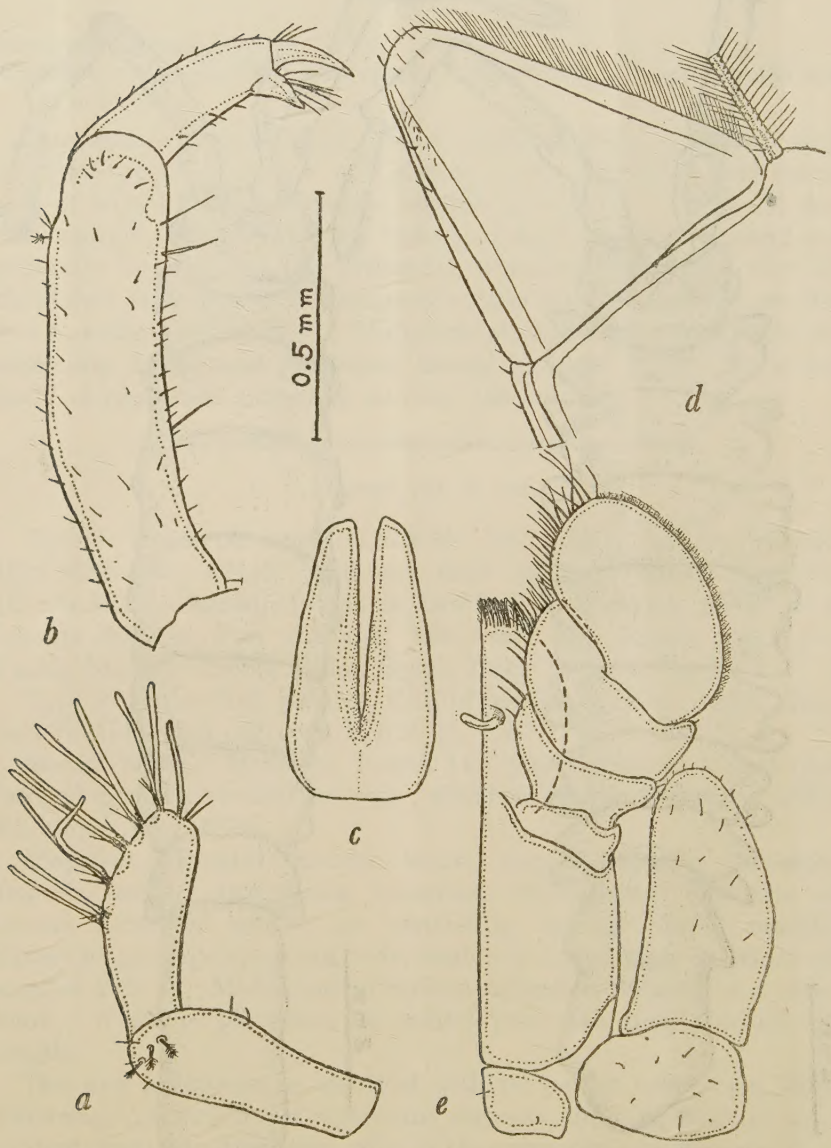

FIGURE 104.—*Erichsonella filiformis isabelensis*, new subspecies: *a*, first antenna, distal joints, allotype; *b*, seventh peraeopod, dactylus and propodus, holotype; *c*, penis, holotype; *d*, left uropod, distal joint, inner surface, holotype; *e*, left maxilliped, holotype. Magnification as indicated by scale.

and in having a greatly elevated mediodorsal cephalic lobe, which is bi- or tri-tuberculate at its apex. In specimens of *E. attenuata* the frontal lamina is narrow and pointed and the cephalon, though slightly swollen dorsally, lacks any elevated apically tuberculate lobe.

Concerning *E. f. filiformis*, Harger and Richardson state: "The angulated epimera are evident from above in front of these [posterior external angles of first two thoracic segments] projections" (Harger 1880, p. 355), and "In the first two segments the lateral parts are produced in very acute processes, one process on either side of each segment. Just anterior to this process is the epimeron, which is also acutely produced, but lies underneath the lateral portion of the segment in a lower plane. The epimeron of the second segment is bilobate, the upper division, in a dorsal view, concealing the lower lobe, which is also very acute" (Richardson 1905, p. 402). These statements are subject to criticism in that they present an erroneous picture of the species. As was said before, the first peraeona somitel lacks any clearly separated epimeral plate, that which Richardson and Harger considered an epimeron being merely an anterolateral expansion of the first somite. The epimeral plate of the second somite consists only of what Richardson considered the "lower lobe." It is almost completely concealed from view dorsally, not by a dorsal epimeral lobe, but by an anterolateral expansion of the second somite. Both Richardson and Harger failed to mention the conspicuous raised posterior cephalon area, which is separated from the anterior and larger part of the cephalon by a deep transverse groove. This area is present in both subspecies.

Female specimens of both subspecies appear to have the angulate lateral and supralateral processes more developed than do male specimens. The one male specimen of *E. f. filiformis* that I have examined has the posterolateral expansion of the second somite reduced to a very small lobe, whereas in two ovigerous females this expansion is nearly as large as the anterolateral expansion of that somite. No nonovigerous specimens were examined.

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